

**2595**

**OHIO EPA COMMENTS ON SITE-WIDE QAPJP**

**XX/XX/XX**

**4**  
**ENCLOSURE**

**OHIO EPA COMMENTS ON  
SITE-WIDE QAPP**

**General Comments**

- (1) Section 1: The Introduction should indicate why it is necessary to have all of the different sampling programs under one QAPP.
- (2) Section 2: This section should include more information on the constituents present at the FEMP site. Explain what the expected contaminants are and the matrices involved.
- (3) Section 3: This section should contain a generalized description of the chain-of-command. Names are not necessary but position and titles should be described.
- (4) Section 4: This section needs to contain QC limits on the precision, accuracy, representativeness, completeness and comparability.
- (5) Section 6: This section should contain procedures concerning decontamination as it relates to sampling. This section also needs some discussion of QC sample procedures for each medium discussed in this section.
- (6) Section 7: This section needs minimum requirements for chain-of-custody for the various labs and subcontractors.
- (7) Section 10: A table with the various "out of control" situation and the appropriate data flags is needed to reduce the confusion in this section.
- (8) Section 12: This section should describe both internal and external audits and the schedule on which these audits are to be performed.
- (9) Section 13: Specific preventive maintenance procedures are needed. Please incorporate.
- (10) Many sections of this document are impossible to evaluate because the methods are missing. It was our understanding that this document was to be the complete QAPP. Please provide the methods.

**Specific Comments**

- (1) Section 2.1.1 page 1, para 1, sent 2: The "site" also includes all contamination that has traveled off of FMPC property.

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- (2) Section 2.2.2, pg. 4: The operable unit definitions in the Amended Consent Agreement should be quoted completely in this section.
- (3) Section 2.2.2, pg. 5, para. 3: Correct the operable unit 2 description of "sanitary landfill" to "solid waste landfill" to agree with the Amended Consent Agreement (see also Section 2.2.4, pg. 7, para 2).
- (4) Section 5.2.5 page 8, para 1, sent 2: Instrument instructions should be provided in this document.
- (5) Section 5.2.6.1: It is unclear as to the procedures to be used. Please explain.
- (6) Section 5.2.6.2 page 10, para 1: Explain more clearly which of the pump tests will be used.
- (7) Section 5.2.8 page 14, para 1: Explain more clearly which radiological survey methods will be used.
- (8) Section 6.2.4.2 page 10, para 1, sent 2: Replace "bothe" with "both".
- (9) Section 6.2.4.2 page 10, para 4: Explain more clearly what is meant by "..on a regular basis..."
- (10) Section 6.7 page 26, para 2, sent 2: It is unlawful to send non-hazardous samples as hazardous [49CFR 173.22(a) and 171.2(a)].
- (11) Section 6.7.3 page 28, Bullet 5: Please correct to read "pH about 12.30 or less"
- (12) Section 7.1.3 page 3, para 1: Please choose whether a sample tag or label is to be used. Please provide the pre-printed label/tag to be used.
- (13) Section 7.1.5 page 5: Please provide a copy of the Chain-of-custody form to be used at the site.
- (14) Section 8.4: It is impossible to evaluate the adequacy of this section without the methods. Please provide.
- (15) Section 8.4.3 page 4: The calibration protocols have not been provided in Appendix J as stated in this section. Please provide.

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(16) Section 9.2 page 1, para 2: The analytical methods have not been provided. Please make it more clear that when the methods are provided they will be in separate volumes and not in Appendix L.

(17) Section 10.2.2 page 2, sent 7: Please state the specific statement of work to which you are referring.

(18) Section 10.3.5 page 7, number 3, sent. 1: See specific comment #15

(19) Section 10.3.7 page 8, sent 2: See Specific comment #15

(20) Section 12.2.2 page 3, para 1: Please provide the checklist to be used for audits.

(21) Section 14.3 page 2: To avoid confusion please rewrite this equation as:

$$RPD\% = 100 * \frac{(D_1 - D_2)}{(D_1 + D_2) / 2}$$

(22) Appendix A page 13, line item TCLP: TCLP is RCRA method 1311

(23) Appendix C.2.5 page 5, para 1, sent 1, word 12: Remove the errant "the".

(24) Appendix C page 14: Page 2 of the DQ Summary Form is missing. Page 1 has been entered twice. Please fix.

(25) Appendix D: The formula for correlation coefficient and coefficient of variation have not been provided. Please provide.

(26) Appendix D.5.3 page 18, bullet 1: Please reference the checklists to the end of this section.

(27) Appendix D.6.3.2 page 27, Number 2: Please move the "n" and the "i=1" so that "n" is above the sigma and "i=1" is below the sigma. Also, to avoid confusion, rewrite the second equation as:

$$\%RSD = \sigma * 100 / x$$

(28) Appendix D.9.6.2 page 69, number 1: Please correct this equation so that the numerator is over the denominator. (See also D.9.7.2 pg 70)

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- (29) Appendix D.9.8.1 page 71, Bullet 1: Please provide the formula for the Coefficient of Variation (CV).
- (30) Appendix F.1.2 page 2, sent 4: Please explain what is meant by "Subsection F.\*\*\*" and/or correct the error.
- (31) Appendix F.1.2.7 page 3, Sent 3: Since data is to be verified and validated during the previous step of this process explain how data transcriptions errors will be alleviated during manual data entry.
- (32) Appendix H.1 page 1, para 3: For lab data to be "accepted" the lab procedures at the time of sample analysis, not present procedures, must be adequate.
- (33) Appendix J.4.8.2 page 31, 7b (Note): Replace the word "Avoud" with "Avoid".
- (34) Appendix K.4.1.6 page 12, Bullet 2:  $K_4Fe(CN)_6$  and  $K_3Fe(CN)_6$  solutions are not particularly toxic if heated vigorously they can produce highly toxic gas.
- (35) Appendix K.4.1.6 page 13, number 2: Explain this procedure more clearly.
- (36) Appendix L: Provide the missing methods.